mechanical engineering

Concordia
UNIVERSITY

real education for the real world

MECHANICAL ENGINEERING

The Faculty of Engineering & Computer Science at Concordia University invites you to discover Real Education for the Real World. Pursue a professional degree designed to meet the technological and environmental challenges of our evolving world. Our Mechanical Engineering program is fully accredited by the Canadian Engineering Accreditation Board and offers a blend of practical and theoretical instruction geared towards helping students achieve success in the job market of the future and establish themselves as professionals in their chosen field of practice.

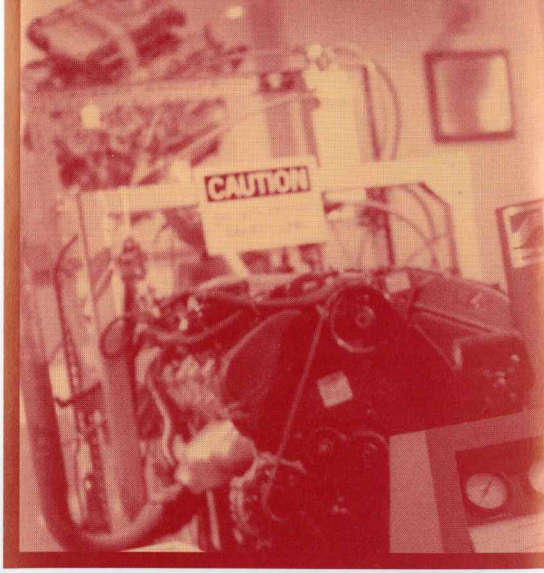
WHAT IS MECHANICAL ENGINEERING?

Mechanical Engineering is concerned with all forms of energy conversion, and its transmission and control; the dynamics of motion, the transfer of heat and fluids, the conception, design and operation of numerous forms of machinery, mechanical and propulsion devices; material structure and properties, as well as the elements of transportation.

Mechanical Engineers have a vast influence on the world today: They design the vehicles that transport us on land, in the air and across water. They build mechanisms ranging from the simple gear and pulley systems found in elevators to the highly complex robots working on modern day production lines. Mechanical Engineers are responsible for cutting-edge laser technology and help develop the energy generators and oil-pumping machinery that provide energy and fuel for our cities and homes as well as the jet engines that power our aircraft. In short, mechanical engineers drive society.

ACADEMIC PROGRAMS

The Mechanical Engineering undergraduate program consists of core courses, with a series of technical electives that allow students to focus on a particular area or field depending on their individual interests and anticipated future professional goals. Four options are available: Thermofluid and Propulsion, Design and Manufacturing, Automation and Control Systems, as well as Aerospace and Vehicle Systems.



The Department offers the following programs at both the undergraduate and graduate level.

- Bachelor in Mechanical Engineering (B Eng) with coop program
- Master of Engineering (M Eng) (Mechanical)
- Master of Engineering (M Eng) (Mechanical) (composites option)
- Master of Engineering (M Eng) (Mechanical) (aerospace)
- Master of Applied Science (MA Sc)
- Doctor of Philosophy - Mechanical Engineering (PhD)

CO-OP PROGRAM

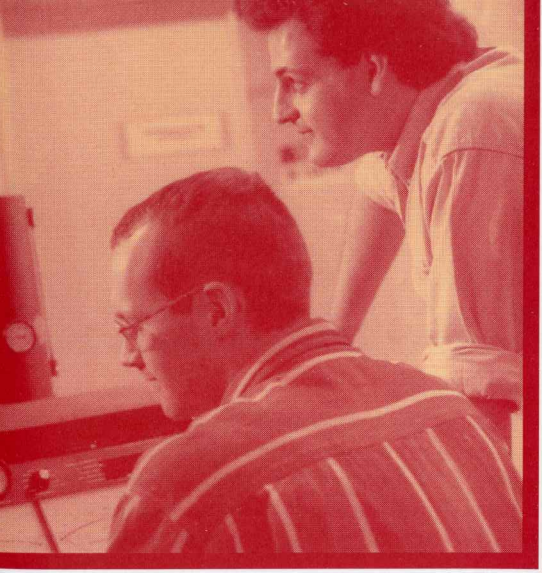
The cooperative program consists of seven study terms interspersed with four work terms. This attractive option enables students to benefit from a first-class education while acquiring 16 months of invaluable work experience and significantly increases their employment opportunities upon completion of their degree. Participating companies such as Bombardier, Pratt & Whitney Canada, Rolls Royce Canada, and SPAR Aerospace provide students with solid internships and ample opportunity for professional development.

ENGLISH LANGUAGE COURSES

In order to facilitate the integration of francophones and international students, the University offers a variety of English language courses. Moreover, students may always choose to write exams and reports in either English or French.

ACADEMIC REQUIREMENTS

The general requirement for admission is the successful completion of the Québec Diplôme d'études collégiales (DEC) including MATH 103, 105, 203; PHYS. 101, 201; CHEM. 101. Graduates of any 3-year Engineering technology program and students from other



provinces are encouraged to apply. Academic requirements and credit transfers will be evaluated on an individual basis.

EMPLOYMENT OPPORTUNITIES

Mechanical Engineers can find employment in a variety of areas such as aerospace, manufacturing, machinery, automobile design, transportation, energy generation and management, structures, robotics and biomechanics.

The Mechanical Engineering program at Concordia prepares students for entrance into industry, business, government service or research. The program's broad-based training provides students with the versatility required to work with professionals in numerous fields on a variety of complex problems.

STUDENT LIFE

Our strong academic mechanical engineering program is complemented by an equally active and dynamic student life. The Mechanical Engineering Student Association (MESA) and student chapters of the Canadian Society for Mechanical Engineering (CSME), the Society for Automotive Engineers (SAE), the Canadian Aeronautics and Space Institute (CASI), the Society of Manufacturing Engineers (SME) and the Canadian Society for Industrial Engineers (CSIE) provide students with the opportunity to participate in numerous social and technical events as well as field trips which help enhance their learning experience. In addition, MESA hosts the annual Robowars competition where students showcase their creativity and knowledge of robotic engineering by designing innovative, self-contained remote control robots. The SAE is involved in numerous international vehicle competitions such as the Supermileage, FutureCar and Mini Baha competitions and have consistently fielded highly successful teams. Besides student association activities, there are also numerous occasions for students, staff and faculty to socialize outside the classroom.

FACILITIES AVAILABLE TO STUDENTS

The program is supported by over 20 laboratories as well as a machine and student workshop. These state-of-the-art facilities allow students to conduct their work efficiently and under the best conditions.

ALUMNI ASSESSMENT

"When I started work after completing my Bachelor of Mechanical Engineering degree at Concordia University, I appreciated the strengths of its program and teaching staff. The course material lead to a strong theoretical foundation combined with practical problem solving skills. Professors maintained relationships with local and international companies which meant they understood the needs of businesses and prepared students exceptionally well. The various options allowed me to tailor the learning experience to suit my own interests and goals. My studies at Concordia continue to serve me well today."

Gerry Bush
Vice President
Spar Aerospace

"My years with the Mechanical Engineering Department were a memorable one. I was fortunate to meet friends, with whom I have formed strong ties, even after the completion of our degrees. I was able to develop strong technical and analytical knowledge thanks to the professional and dynamic professors and support staff, who welcomed students with open arms. I especially admired the open door policy professors had for students. I can now look back and honestly say that I am proud to have completed my degree in the Mechanical Engineering Department. I owe my present professional status to my experience and education obtained at Concordia University."

Tara Vatcher
Certification Specialist
Bombardier Aerospace

To find out more about our program and/or for a tour of our facilities, please call:

Academic Advisor

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